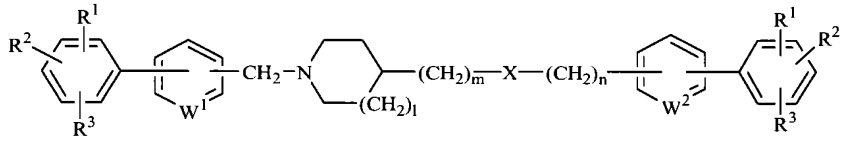
CLAIMS

1. A method for treating pathological conditions caused by reduced production of erythropoietin, comprising administering a cyclic amine compound represented by the following formula (1):



(1)

wherein,

R^1, R^2 and R^3 each independently represent a hydrogen atom, a halogen atom, or hydroxy, alkyl, halogen-substituted alkyl, alkoxy, alkylthio, carboxyl, alkoxycarbonyl or alkanoyl group;

W^1 and W^2 each independently represent N or CH;

X represents O, NR^4, $CONR^4$ or NR^4CO;

R^4 each represents a hydrogen atom, or an alkyl, alkenyl, alkynyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, substituted or unsubstituted aralkyl, or substituted or unsubstituted heteroaralkyl group; and

l, m and n each represents a number of 0 or 1, or a salt thereof or a solvate thereof in an effective amount to a need thereof.

2. The method according to claim 1, wherein R^1, R^2 and R^3 are each a hydrogen atom, a halogen atom, a hydroxy group, a C_1-C_8-alkyl group, a halogen-substituted C_1-C_8-alkyl, an alkoxy group having a C_1-C_8-alkyl group, an alkylthio group having a C_1-C_8-alkyl group, a carboxyl group, an alkoxycarbonyl group having a C_1-C_6-alkyl group, or an alkanoyl group having a C_1-C_6-alkyl group.

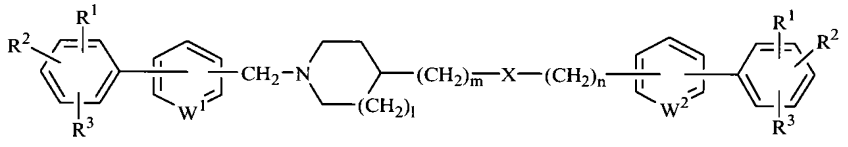
3. The method to claim 1, wherein R^4 each represents a hydrogen atom, a C_1-C_8-alkyl

group, C_3-C_8-alkenyl group, C_3-C_8-alkynyl group, substituted or unsubstituted C_6-C_{14}-aryl group, substituted or unsubstituted heteroaryl group having 5- or 6-membered ring containing 1-4 nitrogen atoms, substituted or unsubstituted C_6-C_{14}-aryl-C_1-C_6-alkyl group, or C_1-C_6-alkyl group having heteroaryl group having 5- or 6-membered ring containing 1-4 nitrogen atoms.

4. The method according to claim 3, wherein in R^4, the substituent of an aryl group, an aryl group of aralkyl group, heteroaryl group, or heteroaryl group of heteroaralkyl group is 1-3 groups selected from the group consisting of alkyl group, alkoxy group, alkylthio group, a halogen atom, a nitro group, an amino group, an acetylamino group, trifluoromethyl group and alkylenedioxy group.

5. The method according to claim 1, wherein the active ingredient is
4-[N-(4-methoxyphenyl)-N-[[5-(3,4,5-trimethoxyphenyl)pyridine-3-yl]methyl]amino]-1-[[2-(3,4,5-trimethoxyphenyl)pyridine-4-yl]methyl]piperidine
or a salt thereof.

6. A method for treating anemia, comprising administering a cyclic amine compound represented by the following formula (1):



(1)

wherein,

R^1, R^2 and R^3 each independently represent a hydrogen atom, a halogen atom, or hydroxy, alkyl, halogen-substituted alkyl, alkoxy, alkylthio, carboxyl, alkoxycarbonyl or alkanoyl group;

W^1 and W^2 each independently represent N or CH;

X represents O, NR^4, $CONR^4$ or NR^4CO;

R^4 each represents a hydrogen atom, or an alkyl, alkenyl, alkynyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, substituted or unsubstituted aralkyl, or substituted or unsubstituted heteroaralkyl group; and

l, m and n each represents a number of 0 or 1, or a salt thereof or a solvate thereof in an effective thereof to a need thereof.

7. The method according to claim 6, wherein R^1, R^2 and R^3 are each a hydrogen atom, a halogen atom, a hydroxy group, a C_1-C_8-alkyl group, a halogen-substituted C_1-C_8-alkyl, an alkoxy group having a C_1-C_8-alkyl group, an alkylthio group having a C_1-C_8-alkyl group, a carboxyl group, an alkoxycarbonyl group having a C_1-C_6-alkyl group, or an alkanoyl group having a C_1-C_6-alkyl group.

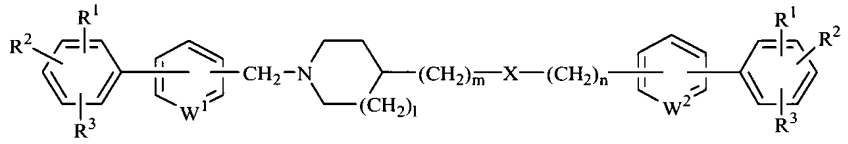
8. The method according to claim 6, wherein R^4 each represents a hydrogen atom, a C_1-C_8-alkyl group, C_3-C_8-alkenyl group, C_3-C_8-alkynyl group, substituted or unsubstituted C_6-C_{14}-aryl group, substituted or unsubstituted heteroaryl group having 5- or 6-membered ring containing 1-4 nitrogen atoms, substituted or unsubstituted C_6-C_{14}-aryl-C_1-C_6-alkyl group, or C_1-C_6-alkyl group having heteroaryl group having 5- or 6-membered ring containing 1-4 nitrogen atoms.

9. The method according to claim 8, wherein in R^4, the substituent of an aryl group, an aryl group of aralkyl group, heteroaryl group, or heteroaryl group of heteroaralkyl group is 1-3 groups selected from the group consisting of alkyl group, alkoxy group, alkylthio group, a halogen atom, a nitro group, an amino group, an acetylamino group, trifluoromethyl group and alkylenedioxy group.

10. The method according to claim 6, wherein the active ingredient is 4-[N-(4-methoxyphenyl)-N-[[5-(3,4,5-trimethoxyphenyl)pyridine-3-yl]methyl]amino]-

1-[[2-(3,4,5-trimethoxyphenyl)pyridine-4-yl]methyl]piperidine or a salt thereof.

11. A method for treating chronic anemia, renal anemia, anaplastic anemia or pure red cell aplasia, comprising administering a cyclic amine compound represented by the following formula (1):



(1)

wherein,

R^1, R^2 and R^3 each independently represent a hydrogen atom, a halogen atom, or hydroxy, alkyl, halogen-substituted alkyl, alkoxy, alkylthio, carboxyl, alkoxycarbonyl or alkanoyl group;

W^1 and W^2 each independently represent N or CH;

X represents O, NR^4, $CONR^4$ or NR^4CO;

R^4 each represents a hydrogen atom, or an alkyl, alkenyl, alkynyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, substituted or unsubstituted aralkyl, or substituted or unsubstituted heteroaralkyl group; and

l, m and n each represents a number of 0 or 1, or a salt thereof or a solvate thereof in an effective amount to a need thereof.

12. The method according to claim 11, wherein R^1, R^2 and R^3 are each a hydrogen atom, a halogen atom, a hydroxy group, a C_1-C_8-alkyl group, a halogen-substituted C_1-C_8-alkyl, an alkoxy group having a C_1-C_8-alkyl group, an alkylthio group having a C_1-C_8-alkyl group, a carboxyl group, an alkoxycarbonyl group having a C_1-C_6-alkyl group, or an alkanoyl group having a C_1-C_6-alkyl group.

13. The method according to claim 11, wherein R^4 each represents a hydrogen atom, a

C_1-C_8-alkyl group, C_3-C_8-alkenyl group, C_3-C_8-alkynyl group, substituted or unsubstituted C_6-C_{14}-aryl group, substituted or unsubstituted heteroaryl group having 5- or 6-membered ring containing 1-4 nitrogen atoms, substituted or unsubstituted C_6-C_{14}-aryl-C_1-C_6-alkyl group, or C_1-C_6-alkyl group having heteroaryl group having 5- or 6-membered ring containing 1-4 nitrogen atoms.

14. The method according to claim 13, wherein in R^4, the substituent of an aryl group, an aryl group of aralkyl group, heteroaryl group, or heteroaryl group of heteroaralkyl group is 1-3 groups selected from the group consisting of alkyl group, alkoxy group, alkylthio group, a halogen atom, a nitro group, an amino group, an acetylamino group, trifluoromethyl group and alkylenedioxy group.

15. The preventive or therapeutic agent according to claim 11, wherein the active ingredient is
4-[N-(4-methoxyphenyl)-N-[[5-(3,4,5-trimethoxyphenyl)pyridine-3-yl]methyl]amino]-1-[[2-(3,4,5-trimethoxyphenyl)pyridine-4-yl]methyl]piperidine or a salt thereof.